

CLAIMS

We claim:

1. An apparatus for forming a lumen from within an hollow body organ, comprising:
 - a tissue positioning device defining at least a first region for releasably adhering a first area of tissue and at least a second region for releasably adhering a second area of tissue thereto;
 - at least one fastener housed within the device and adapted to be deployed such that the first area of tissue is secured to the second area of tissue via the fastener; and
 - a septum removably positionable between the first region and the second region.
2. The apparatus of claim 1 wherein the tissue positioning device defines a slot within which the septum is positionable.
3. The apparatus of claim 1 wherein the tissue positioning device defines a plurality of additional regions for adhering additional tissue thereto.
4. The apparatus of claim 1 wherein the first region and the second region are adjacently located.
5. The apparatus of claim 1 wherein the first area of tissue and the second area of tissue are adhered to the tissue positioning device via a vacuum created in the first region and the second region.
6. The apparatus of claim 5 wherein the first region and the second region are in fluid communication with a common channel defined within the tissue positioning device.
7. The apparatus of claim 6 wherein the common channel is separated via the septum.

8. The apparatus of claim 1 further comprising a plurality of additional fasteners housed within the device.

9. The apparatus of claim 1 wherein the fastener comprises a staple.

10. The apparatus of claim 1 wherein the septum is longitudinally positioned in the tissue positioning device.

11. The apparatus of claim 10 wherein the septum defines at least one surface adapted to abrade adjacent tissue.

12. The apparatus of claim 11 wherein the septum is adapted to abrade using a method selected from the group consisting of cutting, scoring, heating, freezing, and chemical ablation.

✓
13. A method for forming a lumen from within an hollow body organ, comprising:

releasably adhering a first area of tissue to a first region of a tissue positioning device such that the first area of tissue is positioned within a first region of the tissue positioning device;

releasably adhering a second area of tissue to a second region of the tissue positioning device such that the second area of tissue is positioned within a second region of the tissue positioning device;

removing a septum which separates the first region from the second region on the tissue positioning device; and

fastening the first area of tissue to the second area of tissue such that the lumen is formed within the hollow body organ.

14. The method of claim 13 wherein the first area of tissue is releasably adhered to the first region via a vacuum.

15. The method of claim 13 wherein releasably adhering the first area of tissue comprises adhering the first area of tissue via a plurality of openings defined along the first region.

16. The method of claim 13 wherein the second area of tissue is releasably adhered to the second region via a vacuum.

17. The method of claim 13 wherein releasably adhering the second area of tissue comprises adhering the second area of tissue via a plurality of openings defined along the second region.

18. The method of claim 13 wherein removing the septum comprises contacting the first area of tissue against the second area of tissue.

19. The method of claim 13 wherein removing the septum comprises displacing the septum longitudinally relative to the tissue positioning device.

20. The method of claim 13 wherein removing the septum further comprises abrading at least the first area of tissue or the second area of tissue.

21. The method of claim 13 wherein fastening the first area of tissue to the second area of tissue comprises deploying a plurality of fasteners between the first region and the second region.

22. The method of claim 13 wherein removing the septum and fastening the first area of tissue to the second area of tissue occurs simultaneously.

23. The method of claim 13 further comprising removing the tissue positioning device.

24. The method of claim 13 further comprising advancing the tissue positioning device trans-esophageally into the hollow body organ prior to releasably adhering the first area of tissue.

25. A junction within a hollow body organ having an exterior tissue surface and an interior tissue surface, the junction comprising:
a plurality of staples aligned with one another such that the junction is formed by the alignment of staples,
wherein the alignment of staples is fastening at least three portions of the interior tissue surface from within the hollow body organ.

26. The junction of claim 25 wherein the alignment of staples is positioned within a stomach which defines at least a cardiac notch, a lesser curve, and a pylorus.

27. The junction of claim 26 wherein the alignment of staples extends in a straight line from the cardiac notch towards the pylorus.

28. The junction of claim 26 wherein the alignment of staples extends in an angled line from the cardiac notch toward the pylorus.

29. The junction of claim 28 wherein the angled line flares away from the lesser curve.

30. The junction of claim 25 wherein the alignment of staples further includes at least a portion of the exterior surface.